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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,552

08/02/2005

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,552	Applicant(s) MIZOTA, YASUO	
	Examiner Geoffrey L. Knable	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1791

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al. (US 6,461,459) taken in view of Marchini et al. (US 6,702,913) and Hitotsuyanagi et al. (US 2002/0046796).

This rejection is maintained for the reasons set forth in the last office action. As to the amendments to the claims, Ogawa et al. would suggest moving between axial ends of the drum and continuously varying the rotation of the drum would have been the obvious and necessary manner of forming the desired belt strip configuration of Marchini et al. in a process in which control of only the drum rotation speed is effected. Note especially that although Hitotsuyanagi et al. periodically stops rotation of the drum, this is simply to produce a particular carcass path in which the edges are axially directed. Importantly, however, Hitotsuyanagi et al. was not applied for its teachings of any particular strip path but rather as evidence that, in this art, in the context of processes that include successively applying rubberized cord material to a drum along a non-linear path and that use an axially traversing feeder and rotatable drum, it is understood to be suitable and effective to achieve the varying angles by controlling *only the speed of the drum during the traverse of the feed device*. One desiring to form a belt configuration path as taught by Marchini et al. (to thereby achieve the belt homogeneity suggested by Marchini) would have readily understood that no controlled stoppage of the drum would be required or desired since the belt does not include axially directed edges.

3. Claims 1-6 are rejected under 35 U.S.C. 102 (e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ohkubo (US 2003/0024627) as applied in the last office action.

The previous rejections under 35 USC 102(a) over Ohkubo '627 and over equivalent EP '485 have been withdrawn in view of the submitted certified translation of the priority document perfecting the priority claim and evidencing support therein for the claimed subject matter. Ohkubo '627 is however still available under 35 USC 102(e) (filing date: July 18, 2002).

4. Applicant's arguments filed 2/13/2008 have been fully considered but they are not persuasive.

With respect to Marchini, it is argued that the examiner has misconstrued the reference apparently because the different specifics of the progressive application, e.g. that it is from the center outwards, etc. This argument has been carefully considered but is unpersuasive. First, it is not disputed that the *specific* strip application methodology of Marchini et al. differs from that claimed or that of Ogawa. Ogawa and Marchini are however fundamentally both directed to formation of a tire belt from successively applied strips. Further and importantly, Marchini et al. identifies the fundamental geometric realities facing the ordinary artisan in forming a belt reinforcement structure using successively applied strips on a crowned drum, regardless of how these strips are applied. These teachings would therefore have been seen by the ordinary artisan as instructive and important when practicing the Ogawa process on a crowned drum (note again col. 5, lines 25-29 of Ogawa indicating that the

Art Unit: 1791

core/drum can have a crowned outer surface). In particular, Marchini et al. indicates that it is desirable for the belt to be homogeneous, this being achieved by having the belt strips have edges that adjoin one another along their entire longitudinal extension (e.g. col. 9, lines 58+). Marchini then indicates that when applying the strips on a crowned drum, the curvature of the drum makes it impossible to optimally apply the strips.

More specifically, Marchini explains the geometric reality that for a crowned drum, *the length of the circumference at the equatorial plane will be longer than the length of the circumference at the lateral edges*. Because the strips are of a constant width but the drum has these different circumferential lengths, if the strips are applied at a constant angle, *it is geometrically impossible for the strips to advantageously adjoin one another at both the equatorial plane and the lateral edges* (e.g. note col. 9, line 15 - col. 10, line 8). Marchini therefore suggests that this geometric problem can be solved by applying the strips in a manner that the strip angle relative to the midplane gradually increases towards the axial extremities of the strips (esp. fig. 5 and col. 11, lines 1+). In view of this teaching and the fact that Ogawa et al., as noted above, suggests achieving the desired inclination angle of the strips by controlling the rotation of the forming drum/core and the lateral displacement speed relative to each other (col. 9, lines 10-14), it would have been obvious to control these speeds relative to one another to yield the desired angle variation taught to be advantageous by Marchini et al., especially when applying to crowned drums.

While it is not disputed that Marchini uses a different specific application method to actually achieve the desired strip path (including pressing initially at the center, etc.), the fundamental geometric realities accompanying applying belt strips on a crowned drum, as well as the fundamental solution to this problem (varied angular path as in fig. 5) as taught by Marchini, would have been certainly understood as applicable to any process in which a belt reinforcement is formed by successively applying belts strips to a crowned drum, such as in Ogawa. In other words, the problem identified by Marchini, as well as the solution to this problem, would have been understood as applicable to any process in which a tire belt is formed by successive application of strips to a crowned drum, regardless of the particulars of the specific application process of the strips.

It is also argued that Hitotsuyanagi et al. does not cure the deficiency of Marchini as it does not continuously vary the drum rotation velocity. Hitotsuyanagi et al. however was not applied for any particular teachings of any particular application path/pattern but rather as evidence that, in this art, in the context of processes that include successively applying rubberized cord material to a drum along a non-linear path and that use an axially traversing feeder and rotatable drum, it is understood to be suitable and effective to achieve the varying angles by controlling *only the speed of the drum during the traverse of the feed device*. In other words, Hitotsuyanagi et al. teaches the artisan that it is suitable and sufficient, in a similar process/apparatus to Ogawa, to achieve a desired path by only controlling the drum rotation speed. To control the drum rotation during the traverse of the feed device in Ogawa et al. so as to be at a maximum at the

Art Unit: 1791

center and smaller towards the edges to achieve the desirable cord path suggested by Marchini et al. on a crowned drum would therefore have been obvious and predictably expected to achieve the homogeneous distribution attributed to this desirable angular path.

With respect to the Ohkubo rejection, as noted above, the Ohkubo '627 publication is still available under 35 USC 102(e) (filing date: July 18, 2002), the perfection of the priority claim not sufficient to overcome this rejection.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/
Primary Examiner, Art Unit 1791

G. Knable
May 11, 2008